

SOUTHWEST FISHERIES SCIENCE CENTER
FOURTH QUARTER REPORT - FY 2001
For the period July 1, 2001 through September 30, 2001

Submitted by: John Hunter, Division Director, Fisheries Resources Division

Title of accomplishment of milestone: Billfish Angler Catch and Effort off Southern California.

Current status: Ongoing data collection and analysis of sportfishing club and marlin tournament records with the Billfish Angler Survey.

Background information: Currently the Billfish Angler Survey provides the only index that measures angler performance for billfish in the Pacific. This post card survey now provides a 32-year time series of area-specific angler catch, effort and CPUE for many popular fishing areas in the eastern north Pacific. Historical records from billfish sportfishing clubs and tournaments extending back decades also provide valuable time series data useful in developing indices of relative abundance. Collection of these historical data is still underway.

Trends in fishing effort and catch are used to describe changes in local availability resulting from commercial harvest, cyclic weather patterns, and changing economic and social conditions. Recent technological advancements in fishing strategy for large, fast moving game fish such as the striped marlin can also influence trend analysis. These data sets are being analyzed and compared to identify possible bias resulting from changes in fishing power as technology changed the way many of these anglers pursued their prey.

Purpose of activity: Compare time-series data sets of angler success and catch and determine the source and severity of any bias found.

Description of accomplishment and significant results: Preliminary analysis of time series data sets shows significant trends in CPUE and size of catch. Sources of bias such as advanced searching technology including satellite imagery of SST and chlorophyll productivity, sophisticated code groups, advanced tackle and ship design all tend to bias the survey over time but are difficult to quantify.

Significance of accomplishments: Stock assessment of fishery resources are crucial to the development of a fishery management plan. Time series data for the Billfish Angler Survey and from historical club records are used in the draft FMP for highly migratory species to show long term trends in local abundance.

Problems: Collection of historical club data for selected years remains problematic.

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